Gateway

Vol. 2, No.11
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The ARRL Packet-Radio Newsletter

NORTHERN NEW JERSEY 220 MHz DIGIPEATER

The first full time 220 MHz digipeater in northern New Jersey is now operational, according to Harold Winard, KB2M.

The digipeater operating under the call of KB2M-7 is located in Mount Arlington, New Jersey, about 20 miles northwest of Morristown and slightly east of the Delaware River. At an elevation of 1230 feet above sea level, KB2M-7, can cover a substantial portion of northern and central New Jersey and adjacent portions of New York state and Pennsylvania.

The digipeater is presently operating on 221.01 MHz. However, there appears to be some local interference from television receivers and the frequency my change as need dictates.

Harold would like to hear from anyone who has experienced similar interference problems. He may be contacted at the following address:

Harold Winard, KB2M
30 West Union Turnpike
Apt. B-2
Wharton, NJ 07885-1702

From KB2M

OREGON TO SF BAY PACKET CONNECTION

On January 3, 1986, W6UJA located in the San Francisco Bay area, had a packet QSO with WB7SZM in Ashland, Oregon. The 500-mile connection was made via six 2 meter digipeaters, and was the first reported San Francisco Bay area to Oregon packet-radio contact on 2 meters. The path used was via W6AMT, W6AMT-7, WA6YNG-1, W6SOP, WA7KSW-1, WB7SZM-1. It is hoped that this path into Oregon will eventually be improved and made more reliable.

The San Francisco Bay area also has a path to northern Arizona and southern Nevada already in operational via W6AMT, W6AMT-1, W6AMT-2, W6AMT-3, AA6TN-1, WA7HXO-3. These paths are operating on 145.01 MHz, with a redundant system now being developed on 145.05 MHz to increase the reliability.

Via HAM/LINK

HF PACKET TUNING INDICATOR

If you operate HF packet, or are thinking of becoming an HF packeteer, you probably already know that tuning can be very critical. To ease this situation, TAPR is hard at work developing a P.C. board for an HF Tuning Indicator that will interface with the TNC 1 and TNC 2. It is reported that the indicator will allow you to tune to a resolution of 10 Hz.

Working from the circuit that appeared in the Packet Status Register issue number 17, Lyle Johnson, WA7GXD, has laid out a neat two sided circuit board. All active components are available from Radio Shack (3 ICs and 2 LED bar displays).

Prototype boards have just been completed in St. Louis and will be tested in Arizona before being offered for sale by TAPR. The price has not been announced.

Via HamNet

FIRST VK/US PACKET TRAFFIC PASSED

"On January 10, 1986, N6EEG and VK2BVS passed 3 pieces of standard ARRL formatted NTS traffic, marking the first third party packet-to-packet formal traffic. The messages were promptly forwarded from N6EEG to K6APW, where they were put directly into the Pacific Area Net.

"Through the hard work of West coast mailbox owners, VK2BVS and W7GHT (Pacific Area Staff Chairman), it is hoped that there will soon be a reliable method of passing U.S./Australian third party traffic routed to the Pacific Area Net (NTS) via the packet-radio mailbox system.

"Packet radio offers many advantages such as 24-hour time flexibility that is relatively immune to changing band conditions and the disparity of common waking/working hours for schedules between the two diverse geographical areas.

"Experiments will continue, hopefully having VK2BVS able to check in direct to the West coast packet mailboxes and dump all the U.S. bound traffic. All West coast HF Gateways/Mailboxes have assigned NTS liaison stations. We also hope to establish a nationwide standard for NTS store and forward traffic designators, using the WØRLI method. It is hoped that this will also solve the Hawaii and Alaska traffic problems.

"Congratulations to N6EEG and VK2BVS. May this herald in a fruitful year for NTS."

From NI6A

MFJ TNC 2 DELAY

Word has it that delivery of MFJ's new TNC 2 clone has been delayed by a month. This should put the the unit on the shelves sometime in March. The MFJ TNC 2 clone will contain an RS-232-C interface as well as a TTL interface for the C 64 and VIC 20, and will be housed in MFJ's own cabinet. The firmware will be compatible with the TAPR TNC 2 and will support multiple connects and AX.25L2V2. The selling price is reported to be $129.95.

Via WB9FLW

TAPR ANNUAL MEETING

"TAPR has located another hotel for those planning to attend the annual meeting on February 8th. The Roadway Inn, located just across from the All Star Inn, is within walking distance of the TAPR office and a 10 minute drive from the airport and site of the TAPR meeting. The rates at the Roadway Inn are $38.00 for a single and $48.00 for double occupancy. Reservations for the Roadway Inn can be made by calling (602) 884-5800.

"After the Friday night Packet Pizza Party, we will proceed to the Malibu Grand Prix Race Track on 22nd Street in Tucson. This is to continue a TAPR tradition that was started at the 1985 ARRL National Convention. Old timers Harold Price, NK6K, and Lyle Johnson, WA7GDX, will be happy to show newcomers the ropes. It's an experience that you will never forget."

Via WB9FLW

HELP NEEDED

The Little Astronauts Amateur Radio Club of Astoria, New York Intermediate School is interested in packet radio. They would also like to maintain a digipeater at their site.... it would operate on 145.03 MHz to help extend POLINET (Packet Of Long Island Network) into the NYC area and northward.

Wanted is 2 meter FM gear suitable for packet radio. Old crystal radios, including HTs are perfect! If anyone wants to throw in a TNC or computer...you'll have the love and appreciation of all science students at the school! All donations are tax deductible.

For more information, contact:

Little Astronauts Amateur Radio Club
c/o Ron Lulov, KD2LA
Astoria Intermediate School
31-51 21st Street
Long Island City, NY 11106
(718) 274-8316

From KD2LA

NNC PROTOTYPE TESTING UPDATE

We received this update on the Network Node Controller (NNC) from Lyle Johnson, WA7GXD.

"The NNC Prototype PC board has now been suitably hacked because of:

"a) incompatibility of HD64180 uP with Z80(tm) peripherals running Mode 2 interrupts

"b) requirement of parallel printers to get a pulsed signal telling when data is ready.

"I patched the Z-system BIOS to recognize the modified Z80 PIO B port as the system listing device. It is now fully Mode 2 interrupt driven and the OkiData uLine 93 printer loves it! The wait-state generator has been reworked to provide a single wait-state during op-code fetches in the lower 256 kbytes of address space as well as providing the required leading edge delay in the !LIR signal from the HD64180 to more closely emulate the !M1 signal from a standard Z80.

"The system clock is 4.608 MHz (9.216 MHz crystal) and the BIOS has been modified to accept this data rate. The disk drives have been interfaced and run just fine with the disk controller running under DMA control. The SIOs have been tested using a simple test procedure sending HDLC frames and receiving them in a full duplex loopback system; interrupts have not yet been tested with the SIOs. The SCSI interface has been tested to the extent of verifying that the uP can in fact talk to the registers of the NCR5380 chip and read the registers from the chip.

"The modified schematics will be sent to St Louis this weekend to get the necessary changes CADded. We hope to have the revised artwork back in Tucson by Friday the 17th and test boards in time for the annual meeting. One additional change being implemented is replacing the op-amp RS-232-C driver with a CMOS RS-232-C driver for better operation at higher data rates.

"If the revised artwork is accurate, then we will immediately push the button on getting the Alpha and Beta PC boards fabricated."

From WA7GXD

WØRLI VERSION 11.1 RELEASED

Version 11.1 of the WØRLI Mailbox/Gateway software has been released. Hank Oredson, WØRLI, author of the well known PBBS has included several additions to his code. Changes include the following:

On the user side, when a station drops into the Gateway mode, he can monitor activity (in real time) on the other TNC. This may help cut down on channel congestion somewhat, as a user can now see if the station he wishes to call is already connected to someone else. Users entering the mailbox can now add their names to the user log instead of having it entered by the SYSOP. Hank has also added a very short menu for stations flagged as PBBSs.

On the operator side, the SYSOP can flag and display users marked as PBBSs, and allow only stations flagged as PBBSs to connect on either the COMM or PRINTER ports.

To obtain the most recent version of the WØRLI software, send an 8-inch disk with return postage (two disks for source code) to:

Wes Morris, K7PYK
7422 E. McKinley St.
Scottsdale, AZ 85257

From KE3Z

KANTRONICS V 2.0 FIRMWARE

Kantronics has announced the availability of version 2.0 firmware for the Kantronics Packet Communicator. New features are:

- o AX25L2V2
- o Multiple Connects

Price for the upgrade is $20.00 and will be available on February 3rd.

Via DRNET

IBM PC TERMINAL PROGRAM

If you are using an IBM PC or compatible to interface with your TNC, then you may be happy to know that a terminal program for the PC has been developed. Norm Wilcox, W2GRH, has written a packet terminal program called QPACKET based on the popular PC-TALK communications software. According to Norm, the software acts very much like PC-TALK, and uses the same basic command structure. Some of the features included in QPACKET are:

- o PC-TALK like commands
- o TNC initialization file
- o Split-screen operation
- o ASCII and Binary file transfer
- o Auto-answer
- o Remote file transfer

For more information, contact:

Norm Wilcox, W2GRH
RD #5 Box 82
Kingston, NY 12401

From W2GRH

HAPN ANNOUNCES IBM PC PACKET ADAPTER

The Hamilton Area Packet Network, (HAPN) a packet-radio club dedicated to furthering the state of packet radio, has announced the availability of the HAPN Packet Adapter Card for the IBM PC/XT/AT.

The HAPN adapter is unique in terms of its versatility and ease of operation. It is designed for the IBM PC and compatibles. The IBM PC or compatible is rapidly becoming a leader in the amateur community because of its attractive price and excellent performance.

The HAPN packet adapter is a card that plugs directly into one of the slots of the PC. It contains a built-in modem which interfaces to the radio with a DB9 connector. The card is 8.5 inches (22 cm) long and contains a prototype area. The software is powerful and is a delight to use. The transfer of ASCII or binary files is very simple by using the function keys on the keyboard. A popup menu allows you to set up the repeater routing table. Optional software is available for bulletin board operation. Experimental protocols such as VADCG V1 and V2 are also available.

Features of the H.A.P.N. packet adapter :

1. In addition to the AX.25 protocol it also runs the Canadian experimental protocols V1, V2 as designed by Doug Lockhart, VE7APU, of the VADCG (Vancouver Amateur Digital Communications group).

2. Software available at present:

   a. AX.25 host support (included)
   b. bulletin board program PCRBBS (optional)
   c. file transfer programs (optional)
   d. experimental protocol support for VADCG V1, V2 (optional)

3. The HAPN adapter plugs into a PC, PC-XT, PC-AT or compatible. No external cabinet or power supply is required.

4. Simple to interface to your radio. It requires RX audio, TX audio and push-to-talk. The carrier detect (radio channel busy) is generated internally from the received data or optionally brought out from your squelch circuit.

5. Built-in modem is Bell 202 compatible. It uses the XR2206 and XR2211 chipset. The tones are 1200 and 2200hz. The data rate is 1200 bit/s. A hardware watchdog circuit prevents possible TX runaway problems as a result of power glitches or lightning.

6. The board contains a pre-drilled prototype area for personal use.

7. The adapter is based on the INTEL 8273 HDLC/SDLC protocol controller chip with a straightforward interface to the PC.

8. The low level software (device driver) is interrupt driven and stays resident in the PC allowing the adapter to function in the background. An application program such as bulletin board, file transfer or terminal program does not have to be resident for the adapter to function. In this mode, the user is alerted to a caller by a connect alarm utilizing the PC's speaker.

9. Easy customizing for the user. The user configuration such as callsign/SSID, auto logging of packet activity to disk, default repeater, connect alarm etc. are set up using the configuration screen and remembered by the program. These options can be changed at any time.

10. NOTE FOR PROGRAMMERS

    Since the adapter uses the native code of the host computer no cross compilers are needed for anyone wanting to develop his own code.

ORDERING INFORMATION AND PRICE :

All prices are in US$ and include postage and handling in USA or Canada. Please add 3$ for overseas orders.

1. Assembled and tested board with AX.25 host

software and self-testprogram (4 programs and documentation) $199.00

2. Bare board with AX.25 software and construction details $75.00

3. AX.25software$40.00

4. Bulletin board&filetransferprograms $25.00

5.AdvancedVADCGexperimental software $ 25.00

Make checks and money orders payable to H.A.P.N.

The mailing address is :

HAPN
Box 4466, Station D,
Hamilton, Ontario,
Canada, L8V4S7

Via DRNET

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